

Amendments to the Claims:

Following is a listing of all claims in the present application, which listing supersedes all previously presented claims:

Listing of Claims:

Claims 1-55. (Canceled)

56. (New) A memory device comprising:

- a semiconductor substrate;
- an NPN-type transistor formed on the semiconductor substrate;
- an interlayer insulating film formed on the semiconductor substrate to cover the transistor, in which a contact hole exposing a source region of the transistor is formed;
- a conductive plug filling the contact hole;
- a resistant material, in which a bit data "0" or "1" is to be written, above the conductive plug and in electrical contact with the conductive plug; and
- a conductive plate formed on the interlayer insulating film and above the resistant material, the conductive plate being in electrical contact with the resistant material.

57. (New) The memory device as claimed in claim 56, further comprising means for improving data storage of the memory device between the resistant material and at least one of the conductive plug and the conductive plate.

58. (New) The memory device as claimed in claim 57, wherein the means for improving data storage of the memory device comprises a material film, through which electrons can tunnel, between the resistant material and the conductive plate.

59. (New) The memory device as claimed in claim 57, wherein the means for improving data storage of the memory device comprises a material film, through which electrons can tunnel, positioned between the resistant material and the conductive plug.

60. (New) The memory device as claimed in claim 57, wherein the means for improving data storage of the memory device comprises a first material film, through which electrons can tunnel, between the resistant material and the conductive plate, and a second material film, through which electrons can tunnel, positioned between the resistant material and the conductive plug.

61. (New) The memory device as claimed in claim 57, wherein the means for improving data storage of the memory device comprises at least one of a first material film, through which electrons can tunnel, between the resistant material and the conductive plate, and a second material film, through which electrons can tunnel, positioned between the resistant material and the conductive plug.

62. (New) The memory device as claimed in claim 61, wherein the least one of the first and second material films is an n-type poly silicon film, a p-type poly silicon film, a silicon oxide film or an aluminum oxide film.

63. (New) The memory device as claimed in claim 61, wherein the resistant material is an amorphous dielectric film capable of trapping electrons during a predetermined

time required for storing data according to predetermined values or directions of a voltage or current.

64. (New) The memory device as claimed in claim 63, wherein the amorphous dielectric film is a silicon nitride film (Si_3N_4) or an aluminum oxide film (Al_2O_3).

65. (New) The memory device as claimed in claim 64, wherein, when the resistant material is the silicon nitride film, the conductive plug is the same material layer as the material layer of the source region and the conductive plate is an aluminum (Al) plate.

66. (New) The memory device as claimed in claim 64, wherein, when the resistant material is the aluminum oxide film, the conductive plug is a gold (Au) plug or a platinum (Pt) plug, and the conductive plate is an aluminum (Al) plate.

67. (New) The memory device as claimed in claim 61, wherein a material layer consisting of the conductive plug, the resistant material, the conductive plate, and the at least one of the first material film and the second material film has a thickness such that charges used for writing the bit data can tunnel through the material layer.

68. (New) The memory device as claimed in claim 56, wherein the resistant material is an amorphous dielectric film capable of trapping electrons during a predetermined time required for storing data according to predetermined values or directions of a voltage or current.

69. (New) The memory device as claimed in claim 68, wherein the amorphous dielectric film is a silicon nitride film (Si_3N_4) or an aluminum oxide film (Al_2O_3).

70. (New) The memory device as claimed in claim 69, wherein, when the resistant material is the silicon nitride film, the conductive plug is the same material layer as the material layer of the source region and the conductive plate is an aluminum (Al) plate.

71. (New) The memory device as claimed in claim 70, wherein, when the resistant material is the aluminum oxide film, the conductive plug is a gold (Au) plug or a platinum (Pt) plug, and the conductive plate is an aluminum (Al) plate.

72. (New) The memory device as claimed in claim 56, wherein a material layer consisting of the conductive plug, the resistant material and the conductive plate has a thickness such that charges used for writing the bit data can tunnel through the material layer.

73. (New) The memory device as claimed in claim 56, wherein the resistant material is formed of a plurality of amorphous dielectric films.

74. (New) A memory device comprising:
a semiconductor substrate;
an NPN-type transistor formed on the semiconductor substrate;

an interlayer insulating film formed on the semiconductor substrate to cover the transistor, in which a contact hole exposing a source region of the transistor is formed;

an insulating film formed on the entire surface of the source region exposed through the contact hole;

a resistant material in which a bit data "0" or "1" is written formed on the interlayer insulating film to be contacted with the entire surface of the insulating film; and

a conductive plate covering the entire surface of the resistant material.

75. (New) The memory device as claimed in claim 74, further comprising means for improving data storage of the memory device between the resistant material and the conductive plate.

76. (New) The memory device as claimed in claim 75, wherein the means for improving data storage comprises a material film through which electrons can tunnel, positioned between the resistant material and the conductive plate.

77. (New) The memory device as claimed in claim 76, wherein the resistant material is an amorphous dielectric film capable of trapping electrons during a predetermined time required for storing data according to predetermined values or directions of a voltage or current.

78. (New) The memory device as claimed in claim 77, wherein the amorphous dielectric film is a silicon nitride film (Si_3N_4) or an aluminum oxide film (Al_2O_3).

79. (New) The memory device as claimed in claim 78, wherein, when the resistant material is the silicon nitride film, the conductive plate is an aluminum (Al) plate.

80. (New) The memory device as claimed in claim 78, wherein, when the resistant material is the aluminum oxide film, the conductive plate is an aluminum (Al) plate.

81. (New) The memory device as claimed in claim 76, wherein the material film is an n-type poly silicon film, a p-type poly silicon film, a silicon oxide film or an aluminum oxide film.

82. (New) The memory device as claimed in claim 74, wherein the resistant material is an amorphous dielectric film capable of trapping electrons during a predetermined time required for storing data according to predetermined values or directions of a voltage or current.

83. (New) The memory device as claimed in claim 82, wherein the amorphous dielectric film is a silicon nitride film (Si_3N_4) or an aluminum oxide film (Al_2O_3).

84. (New) The memory device as claimed in claim 83, wherein, when the resistant material is the silicon nitride film, the conductive plate is an aluminum (Al) plate.

85. (New) The memory device as claimed in claim 83, wherein, when the resistant material is the aluminum oxide film, the conductive plate is an aluminum (Al) plate.